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Cyclo-ssage Pro-Personal Therapy System. [PPTS] Parkinsons Disease By Dr. P. Heaton-Ph.D. Consultant Orthopaedic Surgeon.

## Cyclo-ssage Pro Personal Therapy system (PPTS)and Parkinson disease

The head unit of the Cyclo-ssage Pro Personal Therapy System (PPTS) generates several intensities of mechanical stimulation that are vital for the treatment of multiple conditions. In this article we discuss the use of the head unit of the PPTS in the treatment of Parkinson disease.

#### Introduction

The first documented literature on the condition was by Doctor James Parkinson in his article titled "the shaking palsy" in 1817. Parkinson disease is characterised by motor and non-motor dysfunctions due to the depletion of brain cells and neurons in the central nervous system that would normally produce dopamine.

In the modern era, celebrity affection, social media and extensive research have all enhanced the management of the disease.

International awareness of the condition certainly peaked when former world heavy weight boxing champion Muhammad Ali was diagnosed with the condition. Hollywood actor, Michael J Fox was also diagnosed with Parkinson. Several charities and the funding they generate continue to support extensive research work that is leading the fight against the condition and improving patient's health and quality of life.

#### Clinical features of Parkinson disease

Motor presentations of Parkinson disease include gait abnormalities such as a shuffling gait. The shuffling pattern results in an expensive energy waste with mobilisation. As such, patients become lethargic with the very minimal of movement. In addition rest tremors and rigidity that compromise coordination and movement affect nearly half of all Parkinson disease patients. Affected patients are therefore prone to falls with the attendant risk of fractures, prolonged bouts of muscle soreness and failure to complete initiated movements.

The non-motor presentations are characterised by depression, cognition, speech and thought impairment. There is a high correlation between Parkinson disease and dementia, which predisposes the individual to long-term institutional care.

#### Pathophysiology of Parkinson disease

The aetiology of Parkinson disease is multifactorial. Trauma, chemicals intoxication and genetic mutations have all been proposed. However in the vast majority of presenting patients the cause is unknown. Unique to all patients presenting with Parkinson is the progressive degeneration and eventual death of dopamine producing cells in the central nervous system substantia nigra.

The depletion of dopamine producing cells in the central nervous system is core to the development of the disease. This depletion is mostly noted in the basal ganglia where normally, cells exert an inhibitory function on the motor control of the body. In the depleted states such as occur with Parkinson a greater motor effort is necessary to undertake normal movement.

### **Treatment of Parkinson disease**

Treatment of Parkinson disease is multidisciplinary. Physician input inclusive of dopaminergic agonist, and neurosurgical input utilising implanted deep brain stimulator should be complimented with PPTS therapy sessions.

# Cyclo-ssage Pro Personal therapy system (PPTS) for treatment of Parkinson disease

Several studies in the literature have supported the use of massage to alleviate both motor and non-motor presentations of Parkinson disease.

The head unit of the PPTS are excellently distributed to allow the patient to comfortably place their head over the cycloid delivery system. Low intensity PPTS therapy will generate mechanical stimulation of the vestibular and cerebellar systems enhancing balance and coordination.

Relaxation of rigid and stiff muscles from repetitive sessions on the PPTS will reduce neck and limb muscle soreness from the condition while also enhancing postural stability.

The literature review reports that head massage systems enhance central nervous system stimulation and elevate mood. At low intensities the PPTS therapy sessions are easily tolerated for prolonged periods without the concerns of dizziness or intolerable tingling noted in the literature from conventional systems.